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ATT: The Service Manager

Dear Sir/Madam

Listed below are the minimum competencies we require of any service technicians wishing to take part in the Smardt Chiller Training course. The cost of the 3 day training course will be \$2750 plus GST. Please be aware that course attendance does not guarantee technician certification as this will depend on the individual's ability. The course training fees are non-refundable.

### **MINIMUM COMPETENCIES**

- Refrigeration Mechanic with a minimum 5 years' experience on Centrifugal Compression Technology
- Understand the Thermal Dynamics of R134A
- Understand and competently interpret the Mollier diagram of the refrigeration cycle
- Comprehension of the following common terms and be able to explain the meaning
  - A) Evaporator Approach
  - B) Condenser Approach
  - C) Compressor Superheats
  - D) Sub-cooling
- Must have access to a laptop computer with windows XP or later (Apple not supported).
- Must be computer literate and confident in the use of excel spreadsheets as well as copying, storage & transferring of files.
- Understand the basic principles of Variable speed drive technology
- Must have a restricted (disconnect/reconnect) electrical license as well as an ARC refrigerant handling license
- Must be proficient in reading and accurately interpreting electrical wiring diagrams
- Understand the relationship between voltage, resistance, current and motor kW
- Must be able to calculate refrigeration capacity by obtaining water side data such as entering water, leaving water temperatures as well as flow rate.
- Understand heat balance and how to check heat rejection vs cooling capacity and motor input kW
- Understand the basic principle of operation of centrifugal pumps and their effect on chiller and system performance
- Understand the importance of system water volume and its impact on chiller and system performance
- Must be an effective communicator with good reporting skills.